

REMARKS

Claims 1-4 are all the claims pending in the application. Claim 4 remains withdrawn from consideration as being drawn to a non-elected invention. Claims 1-3 presently stand rejected.

Claim 3 is rejected under 35 U.S.C. § 112, first paragraph.

Claim 3 is rejected under 35 U.S.C. § 112, second paragraph.

Claims 1-3 are rejected under 35 U.S.C. § 102(b) as being anticipated by Powers (4,568,370).

Analysis

Claim 3 rejection under § 112, first paragraph

Claim 3 is rejected for containing subject matter which was not described in the specification in such a way to reasonably convey to one skilled in the relevant art that the inventors had possession of the claimed invention at the time the application was filed.

In particular, the Examiner states that claim 3 now requires “something not previously disclosed”, due to the amendment of claim 1. Claim 1 had been amended to clarify that the injector means and heating means are associated with each other. This feature was clearly disclosed in the application. The application repeatedly explains that the heating area in the present invention is improved by the physical arrangement between the heating means and injector means.

The Examiner indicates that claim 3 is rejected because it now requires that the main axes of the heating means and injecting means be at a fixed angle and moved with respect to each

other, and that these two features are inconsistent with each other. The Examiner contends that the only way the heating means and injecting means can have a fixed angle, and move relative to each other is “by moving one of the two means along its main axis” and that the application does not provide any support for this feature.

Applicants respectfully note that claim 3 does not require two contradictory features, and that all features are supported by the specification as originally filed so that one of ordinary skill in the relevant art would understand the invention.

However, in order to expedite prosecution of this application, Applicants amend claim 3 to clarify that the main axes of the injecting means and the heating means lie in their respective planes and that these planes are at a fixed angle.

Thus, the injecting means and the heating means can be adjusted with respect to each other while maintaining their fixed angles.

Claim 3 rejection under § 112, second paragraph

The Examiner contends that claim 3 is indefinite “because it requires that the heating and injector means to be in a plane and at a fixed angle and that they moved.” Applicants note that the axes of the heating and injector means are not required to be in the same plane. In fact, in order to achieve a distance d , or d' , these axes cannot be in the same plane (see Figs. 4-5). The heating and injecting means may move relative to each other along the longitudinal axis (X) of the preform while maintaining the fixed angle between their respective planes.

In view of the foregoing, the indefiniteness rejection of claim 3 should be withdrawn.

Prior Art Rejections

Turning to claim 1, a method for fabricating an optical fiber preform includes a step of outside deposition of silica in the vicinity of a heating area. The heating area is created by heating means during at least one pass of the heating means and an injector means associated with that heating means along a longitudinal axis of the preform. The relative positions of the injector means and the heating means are adjusted with respect to each other so that the silica is deposited in the heated area regardless of the position of the heating means. The heating means is a plasma torch.

Powers fails to anticipate the claimed invention. Powers merely discloses two burners, 40, 41 each of which provide heat and inject the silica. In other words, the nozzle of the injector means and the heating means are positioned together. This arrangement causes a cold area to form on the preform, and is the very problem the present invention seeks to overcome. Moreover, Powers fails to disclose that the heating means is a plasma torch.

In view of the foregoing, Powers fails to anticipate claim 1.

The remaining rejections are directed to the dependent claims. These claims are patentable for at least the same reasons as claim 1, by virtue of their dependency therefrom.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Appln. No. 09/519,847

Applicant hereby petitions for any extension of time which may be required to maintain the pendency of this case, and any required fee, except for the Issue Fee, for such extension is to be charged to Deposit Account No. 19-4880.

Respectfully submitted,



Ellen R. Smith
Registration No. 43,042

SUGHRUE MION, PLLC
2100 Pennsylvania Avenue, N.W.
Washington, D.C. 20037-3213
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

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APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

The claims are amended as follows:

1. (Three Amended) A method of fabricating an optical fiber preform including a step of outside deposition of silica possibly doped with at least one dopant by injecting at least one substance in the form of silica or a precursor of silica in the vicinity of a heating area created by heating means during at least one pass of said heating means and an injector means associated with said heating means, along a longitudinal axis of said preform, during which the relative positions of said injector means and said heating means are adjusted with respect to each other, so that said silica is deposited in said heated area regardless of the position of said heating means, wherein said heating means is a plasma torch.

3. (Amended) The method claimed in claim 1 wherein said [heating means have] plasma torch has a main axis in a plane [substantially perpendicular to said longitudinal axis of said preform], said injector means [have] has a main axis in a plane, wherein a fixed angle is defined by the intersection of said plane of said plasma torch and said plane of said injector means [a fixed angle to said main axis of said heating means, in a plane substantially perpendicular to said longitudinal axis of said preform], and said injector means and said [heating means] plasma torch move relative to each other, within their respective planes, in a direction parallel to said longitudinal axis of said preform.